

in process of evolution, not, like some of the other genera, decadent, or almost extinct as he shows for *Delissea*. Six of the Hawaiian genera are endemic there, only *Lobelia* being found elsewhere. This highly endemic generic proportion naturally opens up many problems of distribution, "age and area" possibilities, and that part of the volume which discusses these problems is naturally the most readable.

The reviewer recently had occasion to look over two papers on these islands for *Botanical Abstracts* (Nos. 822 and 832, December, 1918) which showed that for Hawaiian ferns and their allies the relationship was mostly with the east apparently because they are unfitted for overseas transportation; while for strand plants, of which there is a high percentage of endemics the affinities seem to be with America. Mr. Rock shows that four of the Hawaiian endemic Lobelioideae, among them the numerous Cyaneas, are related to American genera. Not very closely related, however, as no Hawaiian lobeliaceous genus is actually in America. *Lobelia*, being rather generally distributed, is therefore not significant in this connection.

Of course the main portion of the book is taken up by the keys to species and their description and illustration. There are also discussions of the insect and bird visitors of the plants, flowering season, root systems, altitudinal range, and some account of the cultivated species. The book, then, is truly a monograph in the best sense of that much misused word.—N.T.

PROCEEDINGS OF THE CLUB

MEETING OF MAY 28, 1919

The meeting was held in the Morphological Laboratory of the New York Botanical Garden, beginning at 3:30 P.M., with Vice-President Barnhart in the chair. There were thirteen persons present.

The minutes of the meetings of April 30 and May 13 were read and approved. Mrs. N. L. Britton gave an informal report of the special meeting of the Club in conjunction with the Wild

Flower Preservation Society, which was held at the Mansion of the New York Botanical Garden on May 15 and at which Mr. Stewardson Brown of Philadelphia gave an illustrated lecture.

Dr. N. L. Britton, chairman of a special committee to write a letter of congratulation to Capt. John Donnell Smith of Baltimore on the celebration of his ninetieth birthday, June 5, read a copy of a letter which had been drafted and this report of the committee was accepted by the Club.

Dr. F. W. Pennell, for the Field Committee, referred to the plans for the Memorial Day excursion, in coöperation with the Philadelphia Botanical Club.

Dr. M. A. Howe, for the Editorial Board, referred to a project for publishing the correspondence between John Torrey and Louis de Schweinitz and suggested authorization for its publication in the Club's Memoirs. On motion of Dr. N. L. Britton it was voted to refer the matter to the Editorial Board with power to publish, if the financial means could be secured.

The resignation of Miss Amelia R. Goodlatte, Passaic, N. J., was accepted.

Dr. Britton exhibited the remarkable seed-pods of a *Centrobium* recently collected in Ecuador by Dr. J. N. Rose.

The announced scientific program consisted of four communications, as follows:

1. "Morphogenesis in *Dictyostelium*" by Dr. R. A. Harper. (No abstract furnished.)

2. Dr. Seaver showed specimens of *Bulgaria globosa* collected by Mrs. H. T. Gussow in the Lièvre woods of Quebec and communicated by Prof. J. H. Faull, of the University of Toronto. While the species has been recorded once from Ottawa, Canada, this is the first living specimen seen by the speaker and so far as he knows only the second record of the species from North America. The American specimens differ from the excellent European illustrations by Schmidel in that the hymenium of the American form is much more expanded. This, however, is thought to be due to a difference in age and is not regarded as of specific importance. In all essential details the American plants seem to be identical with European. The speaker was especially

glad to receive specimens of this plant since a monograph of this group for North America is in process of preparation.

3. "Canadian Arctic Mosses," by Mr. R. S. Williams.

A list made by the speaker enumerates 68 species of mosses collected by various members of the expedition sent out by the Canadian Government, in connection with the Geological Survey of Canada, to the northern coasts of Alaska and British North America in 1913-'16. The genus most largely represented is *Drepanocladus* with 11 species, all sterile; next comes *Bryum* with 9 species, 5 of which are fruiting; all the other genera, 33 in number, are represented by 1 or 2 species except *Dicranum*, of which there are 3, one of which, *D. elongatum*, is in fruit.

The greatest number of species (7) separated out from one collection and growing more or less intimately associated, occurs under no. 60, representing a piece of sod, some 4 by 6 inches on the upper surface, cut out from the tundra on Barter Island, on the coast of Arctic Alaska. The species, all sterile and mentioned in the order of their abundance, the commonest first, are as follows: *Catoscepium nigratum*, *Swartzia montana*, *Drepanocladus brevifolius*, *Bryum neodamense*, *Chrysohypnum stellatum*, *Encalypta brevicolla*, and *Drepanocladus scorpioides*. Under no. 23, a small collection made 50 miles inland from Camden Harbor, Alaska, the following were separated out: *Bryum pallescens*, *Leptobryum pyriforme*, *Mnium affine*, *Drepanocladus aduncus*, and *Rhytidium rugosum*, the *Bryum* and *Leptobryum* bearing fruit. The specimens are sterile unless otherwise stated. One species, *Bryum neodamense*, found in Europe, from the Pyrenees to the Arctic coast, does not seem to have been credited before to America. Another, *Drepanocladus brevifolius*, has been noted from Greenland only, while two others are described as new. The region collected over extends from about 68° to 70° 35' N. and from the northern Alaska coast eastward to about long. 110° W.

4. "Types of Sterility in the Radish," by Dr. A. B. Stout.

Dr. Stout exhibited living plants of cultivated races of the radish, illustrating three types of sterility as follows: (1) blasting of flowers, (2) self- and cross-incompatibility, (3) embryo abor-

tion after fertilization. A brief report was made of the progress and results of experimental studies on these types of sterility in this species.

After the presentation of the papers, they were discussed briefly by some of the members present.

Adjournment followed.

MARSHALL A. HOWE,
Secretary pro tem.